

COP Spec words/sections crossed out & changes added in red and/or underlined
Add the following Subsection, 611.5 and Table 611-2 to Section 611

625.3.3 611.5 Sanitary Sewer Manhole Testing: ~~If required~~ **Unless otherwise approved by the Engineer Contracting Agency,** all new sanitary sewer manholes installed on 27" dia. pipe and less shall be tested for exfiltration either by a watertightness test or by a negative air pressure (vacuum) test modified for the timeframes listed ~~below~~ in Table 611-2. Exfiltration testing shall be performed in accordance with Subsection 611.3(B) and Arizona Department of Environmental Quality (ADEQ) Engineering Bulletin No. 11, Chapter 4, Section B.

When using the watertightness test method, exfiltration loss shall not exceed 0.1 gallons per vertical foot of manhole in a 24-hour period.

Negative air pressure (vacuum) testing shall be performed in accordance with ASTM C 1244, modified for the timeframes ~~below~~ in Table 611-2. Testing shall be performed at the top of the manhole cone for manholes located in paved areas. Manholes outside paved areas shall be vacuum tested at the ring and cover. Testing shall be performed after all backfill and compaction operations are complete and prior to any interior protective coating applications. A negative air pressure of ten (10) inches of mercury shall be drawn on the manhole. The time shall be measured for the vacuum to drop from ten (10) inches to nine (9) inches of mercury. The manhole shall pass this test if the time to drop in mercury meets or exceeds the ~~following~~ values in Table 611-2.

TABLE 625-4 611-2

MANHOLE DEPTH	MINIMUM TEST DURATION (SECONDS) 48-INCH DIAMETER MANHOLE	MINIMUM TEST DURATION (SECONDS) 60-INCH DIAMETER MANHOLE
10 42 feet or less	60	75
Greater than 10 42 feet to 15 feet	<u>75</u>	90
Greater than 15 feet	<u>90</u>	105

~~*Manholes greater than 12-10 feet in depth shall be assumed to be 60 inch diameter unless otherwise allowed by the Contracting Agency.~~

If manhole joint compound is pulled out during the vacuum test, the manhole shall be disassembled and the joint repaired or replaced as necessary. The vacuum testing shall then be repeated until the manhole passes.

RE-ORG, RE-FORMATTING DIRECTION:

[Renumber 611.4 to 611.6, and renumber 611.5 to 611.7]

[Add to Section 611.7:]

Exfiltration testing of sanitary sewer manholes is considered incidental to the cost of furnishing and installing the manhole. There will be no separate measurement or payment for this testing.